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MAPS

China: Food Surpluses and Deficiencies; IRIS R&A map No. 8314
China: Coal Production and Consumption; IRIS R&A map No. 8315

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Summary

Food production in China is normally sufficient to maintain consumption at a subsistence level. Currently, the chaos due to political strife, disruption of transportation, hoarding and inflation, and migration of peoples has increased the complexity of the food situation. The major area of critical shortage is Kwangtung Province. Conditions in the Shanghai district and North China (normally importing areas) are unstable; recent reports, however, indicate that there is no critical shortage of food. It is concluded that total foreign food imports needed to supply all major food deficits will be in the vicinity of 2,225,000 metric tons. Of this total, at least 1,500,000 metric tons may be needed in Kwangtung Province alone.

The most important coal-producing areas of China lie in the provinces of Hopeh, Shantung, Shansi, and Honan. Up to the time of the Japanese surrender, mines in these areas were producing at a rate roughly comparable with pre-war production, but since the surrender, production has fallen off sharply. Current needs are serious due to sabotage, labor trouble, and lack of transportation and maintenance. Total Chinese production for 1945 may reach 20 million tons (normal production is variously estimated up to 30 million tons).

In northeast China, most bulk transport is by rail; in the southeast, by water, and in the west, by road or trail. Of a pre-war total of nearly 8,000 miles or railroad, approximately

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2,000 miles have been destroyed. About half of the destroyed mileage is essential to the movement of food and coal. Nearly all of China's coastal vessels and large river boats were lost during the war, and her fleet of small river craft was reduced. Most coastal highways have been destroyed, but the network of roads in the interior has been somewhat improved; motor vehicles, however, are few in number and much in need of repair.

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I. INTRODUCTION

Food production in China normally is sufficient to maintain consumption at subsistence levels.[1] However, lack of proper transportation facilities, inadequate provision for storage, recurrent floods or droughts, and insect ravages, are responsible for a constant threat of local famine.

Most of China north of the Yangtze is dependent upon either spring or winter wheat crops. Millet and kaoliang are also very important in much of North China, but western Hupeh and nearly all of Szechwan are rice producing areas. South of the Yangtze, rice is the most important staple; southern China has a double-cropping rice economy.

In spite of local famines, Chinese farmers, as a group, normally produce enough food to maintain themselves. Critical areas, in respect to food deficiency, lie within the densely populated coastal regions. The latter are partially supplied by their hinterlands, but normally require large supplementary imports.

In pre-war years imports were from foreign sources inasmuch as food products from regions of surplus in the remote interior of China, could not be transported to coastal deficit areas as economically as foreign supplies could be imported. On the other hand, even though deficiencies in coastal areas were relieved by foreign imports, experience has proved the impracticability of attempting to alleviate major famines in the interior by moving foodstuffs inland from

1/ Appendix 1: China (22 provinces) Food Production, 1931-1937 Average

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coastal ports.

Current intelligence, makes it apparent that there will continue to be a critical shortage of coal for Chinese industry, particularly in the Central and South China industrial cities [Ch'ing-tao (Tsingtao), Han-k'ou (Hankow), Hong Kong, Canton, and the Shanghai area] until normal production and transportation are resumed. Rail transport itself is greatly handicapped by lack of coal. Virtually all industrial cities not in the immediate vicinity of coal fields are undergoing serious shortages and in most cities power plants and other public utilities are operating on greatly reduced schedules. Ocean shipments are very small and rail transportation are not yet able to carry coal southward or to replenish stocks at the exporting ports [Ch'in-huang-tao (Chinwangtao), Ta-ku--T'ang-ku, Ch'ing-tao, and Lao-yao].

Recently coal has been imported in relatively small quantities from Japan, Formosa, and even Australia, to aid in meeting the critical requirements of the coastal cities. These sources, however, cannot be expected to supply enough coal to meet minimum coal requirements.

Stocks appropriated during the war by the Japanese were acquired at the expense of the Yangtze Valley and coastal industrial cities. Thus stocks in China's southern consumption areas were extremely low at the end of the war and have not been replenished.

Even within the coal producing areas of Hopei and Shantung political strife and lack of transportation interfere with the supply of coal to industry in T'ien-ching (Tientsin), and Pei-p'ing (Peking).

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The large producing areas of the Kailan Mining Administration near T'ang-shan are not securely connected with the nearby coal port of Ch'in-huang-tao; the railroad between the Po-shan fields and the port of Ch'ing-tao is not in effective operation; and the Tsao-chuang fields cannot be tapped either via the T'ien-ching--Pu-k'ou Railroad or via the port of Lao-yao.

Although distribution is the critical problem, coal production has fallen below its pre-war levels in recent years. Estimates of pre-war coal production in China vary between 21,000,000 and 30,000,000 tons a year. Coal production for 1945 probably will not exceed 20,000,000 tons. Some mines have been partially or totally abandoned because of flooding and sabotage, military exigencies, political troubles, labor difficulties, and lack of rail and water transport.

The more highly developed forms of transportation in China -- railroads, motor vehicles, and steamers -- have suffered severe damage from war and political strife, and will need considerable rehabilitation and replacement to provide for long-range transport needs.2/ The traditional Chinese methods of transportation -- carts, pack-animals, and small river craft -- were only slightly affected by the war and are available for short-haul local transport, and to supplement remaining rail, motor, and steamer transport.

North China depends chiefly upon its railway system of three east-west lines from the main ports, connecting with or intersecting three north-south lines. No main line is in complete operation at

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2/ IRIS R&A map Nos. 8314 and 8315

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present, due to destruction by rival political groups, but sections of all lines are operating. The excellent highway from Pei-ping to T'ang-ku, a few highways developed by the Japanese, and sections of the Grand Canal supplement rail transportation.

In central and South China, the Yangtze and West rivers with their tributaries provide the chief means of access to the interior. Roads in this area, most of which were destroyed during the war, are now being repaired and new ones are being built to provide transportation from the South China ports. Most railroads south of the Yangtze were so severely damaged during the war that major repairs will be required to make them serviceable.

Transport routes connecting west China with the coast are of low capacity. The Yangtze is navigable for small cargo vessels as far as Ch'ung-ch'ing (Chungking) and beyand, and trunk highways are being developed connecting Ch'ung-ch'ing and K'un-ming with the Northwest Highway to the north and with the major cities on the east and south-east coast. A through rail route across northern China could be achieved by reconstructing the Lunghai Line as far west as Sian, the starting point of the Northwest Highway.

Shanghai, Ch'ing-tao, Hong Kong, and T'ien-ching--Ta-ku are China's main unloading ports, in decending order of importance. All have rail connections to the interior; in addition, Shanghai and Kowloon have inland water routes. Ch'in-huang-tao is the chief coal loading port, and is served by the Pei-p'ing-Mukden line from the Kailan mines near T'ang-shan.

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II. PRE-WAR AND CURRENT FOOD CONDITIONS

Regional Chinese statistics concerning food stocks are usually unreliable, and local officials frequently disagree as to the volume of local food reserves. Furthermore, the current situation is complicated by (1) disruption of existing transportation facilities, (2) political strife, (3) the migration of peoples, and (4) hoarding coupled with inflation.

A. Regional Summary of the Present Situation

At the present time China's most critical deficit province is Kwangtung.[3/] Eastern Kweichow, Hupei, Honan, Shensi, and Sikang provinces are regions of general food deficiency. Kwangsi and Szechuan are the only two provinces which appear to have a surplus of foodstuffs. Northern Hunan and eastern Hupei, normally regions of surplus, have been hard hit by Japanese looting, drought, and other ravages. These areas are currently deficient or at best only self-sufficient.

Except for local deficiencies, the coastal provinces north of Kwangtung and east of Hupei and Honan are self-sufficient. Latest available information seems to indicate that Shansi and the interior provinces of Suiyuan, Ningsia, Kansu, Chinghai, and Yunnan are also self-sufficient.

An early estimate on 1945 summer crops, for a few provinces,

3/ China: Food Surpluses and Deficiencies; IRIS, R &AA Map No. 8314, this map represents as accurately as available information permits, the current food situation by province and wherever possible for smaller, critical areas up to 1 December 1945.

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was prepared by the Chinese. Inasmuch as their estimates were given as percentages of normal, it should be pointed out that the Chinese conception of "normal production" generally means a "bumper harvest." The results of this survery are as follows:

Ningsia	70%	Hupei	40%
Kansu	40%	Yunnan	70%
Chinghai	60%	Kweichow	60%
Shensi	40%	Hunan	40%
Szechuan	60%	Kwangsi	60%
Honan	60%		

Overall crop production for the years 1938-39 was better than normal; fair harvests were reported for 1940-41; with the exception of Honan, China's 1943 crop was good; 1944 produced a bumper crop; and all evidence seems to indicate that 1945 harvests were comparable to pre-war tonnage.[4/] More specifically, total current food reserves, according to all reports, are greater than in many years when no major famines were reported.[5/] Therefore, the average total food shortage in China will probably amount to the sum of the total pre-war foreign imports plus an additional amount determined by domestic losses due to lack of adequate transportation, and hoarding and inflation.[6/]

4/ To draw comparison with pre-war average, see Appendix 1.

5/ Dawson's early 1945 estimates on 15 provinces of Free China, state that the current crop is 0.5 percent greater than the 1931-37 average.

6/ Appendix 2: Current Food Situation in Selected Provinces and City Districts in China

B. Food Imports Necessary for Complete Restoration of Pre-war Consumption Levels.

Both Chinese and foreign agricultural experts have derived estimated total tonnages of food imports which will be necessary to provide relief for post-war food shortages in China. All of these estimates include numerous food items, but wheat and rice make up approximately 80 percent of the total; therefore, these products receive greatest attention in this study. At the present time food imports seem to be needed chiefly to offset a deficiency brought about by inflation and hoarding, rather than to forestall a major internal crop shortage.

During the period 1931-38, China imported an average of 795,000 metric tons of rice and 300,000 metric tons of wheat per year or a rough annual total of 1,095,000 metric tons of grain and cereal foods. Other reports indicate a higher figure for wheat imports. Total foreign imports for all China have been set at 1,725,000, tons these are pre-war figures for all foods. Recent reports suggest that the normal foreign rice supplying areas will not have an exportable surplus for some time to come.7/ Even if food stocks in these areas were sufficient to permit token exports to China, Chinese shipping is inadequate to transport appreciable supplies.

Early Chinese estimates on post-war food requirements were mainly for the occupied areas, exclusive of the four northeastern provinces and Formosa. The total food loss was calculated on the

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7/ Appendix 3: Food Imports and Normal Supplying Areas.

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basis of (1) the net decrease in food production in occupied areas (in some cases the Japanese were responsible for increased food production), (2) the food taken by Japanese looting and requisition (much of this year's harvest was probably recovered), and (3) the effect of the inundation of the Yellow and Huai River areas. At best these Chinese estimates were only approximations and must have been partly based upon inference.

In the area until recently referred to as "Free China" food production and consumption should be approximately the same as in pre-war years, and in many instances former "Occupied China" will be better supplied with staple foodstuffs than was generally predicted.[8]

Chinese estimates placed the net deficit for occupied areas at 7,700,000 metric tons. This was later reduced to a bare minimum of 3,270,800 metric tons of foreign foodstuffs, of which UNRRA was asked to contribute 1,254,000 metric tons at a cost of approximately US$173,880,800. In view of the reported size of current harvests, the total amount of foreign foodstuffs required should not exceed the average annual imports before the war. However the political situation, deterioration of transport facilities, and hoarding may result in a loss of 500,000 to 1,000,000 metric tons of domestic foods in local markets. This loss should be added to the total

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8/ Appendix 1: China, (22 provinces) Food Production, 1931-1937 Average.

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pre-war foreign imports to derive total requirements for 1945-1946.

Owen L. Dawson, Agricultural Attaché of the American Embassy at Chungking, made the following estimates based upon incomplete crop and stock information and pre-war import requirements:

Estimated Minimum Import Requirements of Principle Food Products for China and Manchuria, July, 1945 - June, 1946

Name of Produce	Estimated Minimum Import Requirements 1,000 metric tons	Percent
Rice	750)	
Wheat	500)	83.3
Beans	100	6.7
Sugar	45	3.0
Fish and Meat	50	3.3
Milk	10	0.7
Fruit:		
Fresh	15	1.0
Dried	4	0.3
Vegetables, dried	5	0.3
Fats and oils	21	1.4
Total	1,500	100.0

Dawson's estimate was made about 17 September 1945, and is a little under one-half the tonnage estimated by the Chinese as total requirements needed from foreign food sources. However, it should be emphasized that even though CNRRA has limited requests from UNRRA to only 1,254,000 metric tons, this figure might be increased by the lack of surplus foodstuffs in regions that normally supply imports.

Available statistics suggest that China will need at least the original amount requested from UNRRA to meet minimum consumption needs in Kwangtung Province alone; the need for food imports to help prevent further hoarding and to reduce inflation is also an important factor.

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C. General Conclusions and Estimated Requirements

In spite of considerable disagreement in respect to the status of the current food situation and its seriousness, the pertinent data may be summarized as follows:

Chinese Food Estimates (in metric tons)

Minimum Food Import Requirements	3,270,000
Requested from UNRRA	1,254,000
Balance Which Must Be Supplied by Other Sources: Chinese or Foreign	2,016,800
Food Currently Available for Export, in Normal Foreign Supplying Areas[9]	None
Total Deficiency Which Must Be Supplied by Free China Areas	2,016,800
Normal Prewar Imports to China Proper (Average, foreign)	1,725,000[10]

Owen Dawson's Food Estimates
(All Food Crops, 1943-1945)

Year	Production
1945	74,541,000 metric tons[11]
1944	84,594,000 " "
1943	77,050,000 " "

Dawson's Final Conclusion:

Total Deficit To be Balanced by Foreign Imports (Minimum Requirements)	1,500,000 metric tons

Dawson's estimate of 1.5 million metric tons of food imports implies that this is the total minimum requirement which will balance all deficit areas in formerly occupied China. This figure seems low, in spite of reports of good harvests in the major liberated areas.

9/ Appendix 3: Chinese Food Imports and Normal Supplying Areas.
10/ Total imports with the exception of sugar and fish.
11/ Dawson states that 1945 crops in 15 provinces of Free China are 0.5 percent greater than the pre-war level.

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Assuming that harvests were equal to pre-war production in these areas,[12] disruption of transportation facilities, political disturbances, hoarding, and inflation will undoubtedly tie up from 500,000 to 1,000,000 metric tons of food. If the normal average pre-war imports to China Proper amounted to 1,725,000 metric tons, the following situation might be expected to obtain:

Pre-war Foreign Imports	1,725,000 metric tons
Minimum Domestic Stocks Likely to be Lost to Local Food Markets	500,000 " "
Total Foreign Imports which will probably be necessary to supply all Food Deficits, including loss of Foreign Imports and some Domestic Stocks	2,225,500 metric tons

If this figure represents the minimum requirements to supply Chinese deficiency areas, food stocks might be allocated to critical areas in order of importance as follows:

Kwangtung Province	1,500,000 metric tons
Shanghai District	500,000 " "
North China Areas	225,500 " "
Total	2,225,500 " "

D. Rehabilitation of Transportation for Emergency Movement of Food

Rail routes normally run to nearly all of the areas likely to experience a critical food shortage in the immediate future.[13] Minor repairs would permit large shipments of food by rail to T'ien-ching, Ch'ing-tao, and Shanghai, but the area with the most critical

12/ Appendix 1: China,(22 provinces) Food Production, 1931-1937 Average
13/ IRIS R&A Map No. 8314, China: Food Surpluses and Deficiencies.

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shortage, in and around Canton, can receive relief by rail only if a 210-mile stretch of line through difficult terrain is entirely rebuilt. Coastal cities between Shanghai and Canton are not served by any rail lines.

There is a serious shortage of locomotives and rolling stock. Wood for ties is inadequate, and almost no rails for rehabilitation are available. Grease, oil, and replacement parts are also urgently needed.[14]

Summary of Railroad Repairs Necessary for Emergency Movement of Food

Name of Line	Total Mileage	Normal Annual Capacity	V-J Day Capacity in tons	Present Condition Mileage Destroyed	Mileage Damaged
Pei-p'ing--Suiyuan	505	3,500,000	3,500,000		about 50
Pei-p'ing--Mukden	527	4,500,000	4,500,000		about 50
T'ang-shan--Ch'in-huang-tao		6,000,000	6,000,000		
Pei-p'ing--Han-kou					
N of Yellow R.	421	4,300,000	4,300,000		about 100
S of Yellow R.	338	4,300,000	1,000,000		about 300*
T'ien-ching--P'u-kou	626	4,000,000	4,000,000		
Lunghai,					
E of Cheng-hsien	350	3,000,000	3,000,000		about 100
W of Cheng-hsien	426	3,000,000	1,500,000	140	
Han-k'ou--Canton	650	2,000,000	Service in N & S only about 210		
Hunan--Kwangsi	about 400	1,900,000	Local service	100	200*
Totals	4,243			450	800

*Roadbed in poor condition. Other damaged sections have had rails and ties removed, but the roadbed is usually in fairly good condition.

14/ Appendix 5: Present Status of Transportation in China; Appendix 6: Rehabilitation of transportation in China.

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Information regarding the quantity and types of shipping available in Chinese waters is very scanty. In 1937, about one million deadweight tons of vessels were operated in coastal trade, and about 500,000 tons in inland waters, chiefly on the Yangtze River. At present, only some 250,000 tons of shipping of all types are reported to be in operation. Most of this tonnage consists of small river craft; nearly all the river and coastal steamers, and three-fourths of the junks formerly engaged in coastal trade, were lost during the war.

Chinese shipping companies report 9 vessels totalling 29,000 gross tons available for service on the lower Yangtze, and 5 vessels totalling 6,900 tons, on the middle Yangtze. In addition, some 50 large river craft totalling 52,000 tons were taken over from the Japanese, but about half of these need extensive repairs.

Highways are not extensively used for bulk movement of food, although truck, cart, animal, and back-pack are all used for local distribution. At best, highways can only supplement railroads and waterways for relieving critical shortages in wide areas; continuous heavy traffic would damage nearly all Chinese road surfaces, the few thousand trucks available are grossly inadequate; and spare parts and supplies of gasoline are not available, except in west China. Spare parts are almost completely lacking.

Available information indicates that in all of China no more than 25,000 motor trucks may be considered mobile or repairable.

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The 20,000 trucks reported to have been captured from the Japanese are definitely of the "graveyard" variety; only about 3,000 are in serviceable condition.

Lack of sufficient mechanics, repair parts, and other facilities in most parts of China, results in a very rapid deterioration of all motor vehicles. Conditions in southwest China, however, are more favorable than elsewhere. Fuel supplies are adequate only in west China and in Shanghai.

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III. CURRENT COAL CONSUMPTION AND PRODUCTION IN CHINA

A. Iron, Steel, and Power Industries

Coal consumption in China is limited largely to areas within a 50 mile radius of mines, and to cities along the coast, navigable rivers, and railroads. One-third of the consumption of China Proper is concentrated in the Shanghai, T'ien-ching, Pei-p'ing, Han-k'ou, Canton, and Nan-ching areas.[15]

The distribution of China's pig iron industry is an important element in establishing the flow of coal. The largest plant before the war, near Han-k'ou, received coal from Hupei and Hunan by water, and by rail from the Tai-yuan area and from along the Pei-p'ing--Han-k'ou Railroad. The blast furnaces produced 329,000 tons of pig iron a year.

The Lung-yen furnaces at Hsuan drew upon Chahar and Shansi (Ta-t'ung) coal. This plant had an annual capacity of 183,000 tons of pig iron.

Men-t'ou-kou near Pei-p'ing, received coal from nearby, and was in a central location for the shipment by rail of coal from Yang-ch'uan and Ta-t'ung. The annual pig iron capacity was 154,000 tons.

The blast furnaces at Ch'ing-tao drew upon Tsao-chuang and Po-shan coal. Their annual capacity was 113,000 tons of pig iron.

T'ai-yüan near the Yang-ch'uan coal producing area, was the principal steel-producing center of China and had a pig iron capacity of 76,000 tons.

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[15] China: Coal Production and Consumption; IRIS R & A Map No. 8315.

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Near T'ang-shan were blast furnaces with a capacity of 73,000 tons. Ma-an-shan between Wu-hu and Nan-ching used Huai-yüan and Tsao-chuang coals. It produced about 70,000 tons of pig iron annually. At Shanghai there were furnaces which produced 16,000 tons of pig iron annually.

With the war, large-scale reduction of industrial production took place in the coal deficiency areas of the Yangtze Valley and the southeast coast. Free China developed heavy industry in Szechuan and Yunnan, where coal is available, and some of these industries should be able to continue to operate in their new locations. In occupied China, only in the northernmost provinces was industry strengthened and its demands for coal increased.

Another major use for industrial coal is in the generation of electric power. Chinese pre-war needs for coal for electric power probably amounted to 1,200,000 tons. In the large urban areas, electric power was used for pumping water, and running industrial machinery. Almost 85 percent of the total electric power was used in eight large cities (Shanghai, Canton, Han-k'ou, T'ien-ching, Ch'ing-tao, Pei-p'ing, Nan-ching and Hang-chou). Temporarily the Shanghai Power Company, China's largest, is using oil supplied by the United States Navy as a supplementary fuel. Presumably oil might be used to a somewhat greater extent in other coastal power plants.

Technological changes during the war have affected coal requirements. The sinking of many coal-burning steamships and their replacement with oil-burning vessels may reduce the coal-bunkering activities of Hong Kong,

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Shanghai, and the Shantung ports of Yen-t'ai (Chefoo), Wei-hai-wei, and Lung-k'ou. Such reductions, however, may be balanced by greater coastal traffic by small steamers.

B. Coal Stocks by Regions

1. Southeast Coast.

Kuantung Province was reported to have only 2,500 metric tons of coal in stock in mid-October. However, shipments of 8,000 tons from North China and 7,500 tons a month of poor quality, local coal have since made it possible for the railroads and public utilities to discontinue the use of wood for fuel. The needs of the province are 35,700 tons a month, 7,500 for Canton's power plants alone.

2. Central China.

Han-k'ou and Wu-ch'ang, badly damaged by the war, have been reported lacking fuel, light, and power for months. Since October 15, power was supplied only to one water pumping station in Han-k'ou and wood was used to generate power. Reports on coal stocks ranged from none at all to 5,000 tons. Prospects for relieving the shortage by rail shipments from the north are slight because the rail line has very small capacity at present and is subject to frequent interruption of service. The government does not exercise control in the mining areas adjacent to the railroad. The great bridge across the Yellow River was severely damaged just before the Japanese surrender, and other smaller railroad structures have been wrecked. Shipments from Hunan in the south, via rail and river, appear to provide the only prospects for more coal.

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The Shanghai--Hang-chou-Nan-ching triangle in the lower Yangtze Valley (which normally imports its coal by sea and over the T'ien-ching--Pu-k'ou railroad) has about one month's supply. The railroad is in poor repair and has been cut. Ocean shipping is improving to some extent. Local transport between the three cities is fair and in an emergency could be met by interchange of stocks.

In September there was said to be coal available near Pang-fou, Tsao-chuang, and Lao-yao--Tung-hai (Hai-chou) to meet the immediate requirements for public services in the lower Yangtze Valley. However, both Tsao-chuang and Huai-nan are in the hands of the New Fourth Army. Negotiations have proceeded slowly to make the stocks at Lao-yao and Tung-hai, estimated at 80,000 tons, available to Shanghai.

In Nan-ch'ing estimated coal supplies were lower in mid-November (3,500 tons) than six weeks earlier and considerably worse than in mid-September when the supply of soft coal was described as sufficient. All coal is now reserved for the power company. At Hang-chou public utilities are still operating. Hang-chou had small stocks at the time of the surrender.

On November 12, Shanghai's stocks were reported to be 39,000 metric tons. Power requirements alone would absorb this coal in about a month at present levels of operation. However, there has been rapid improvement. A November shipment of 62,000 tons to Shanghai from Ch'in-huang-tao has been reported. Shipments from

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Japan and Formosa have also been announced. Still, supplies are far below normal: a stock of 250,000 to 300,000 tons is normally needed for one month. As compared with pre-war bunkering requirements of about 80,000 tons a month, Shanghai's current needs for this purpose are between 10,000 and 15,000 tons a month. It is reported that enough coal will be available to fill this need.

3. North China

Stocks at the ports of Ch'ing-tao, Chin-huang-tao, and Ta-ku--T'ang-ku are sufficient for the shipment of not more than 220,000 tons, of which 94,000 tons (at Ta-ku--T'ang-ku) are reported to be reserved for military purposes. At Ch'ing-tao a 60,000 ton stock was reported on November 26 (a slight reduction since October 1), and at Chin-huang-tao an equal amount was reported November 12.

Inland, T'ang-shan and Ku-yeh had 100,000 tons on November 12, but only 5,000 tons a day are now being mined. The T'ang-shan, T'ien-ching, and Pei-p'ing--Man-t'ou-kou areas have especially large local industrial coal requirements. T'ien-ching and Pei-p'ing were each reported on November 12 to have one month's coal supply.

Power has been rationed at Pei-p'ing since September when the North China Electric Enterprise Company decided to stop the supply of power except to the food industry. Earlier reports indicated that there was sufficient coal in Pei-p'ing to meet 20 percent of the needs during the winter.

Still further inland at Tai-yüan, Shao-yang, Yangchuang, and Shih-chia-chuang, there may be considerable stocks of coal but because of political dissension and the condition of the railroads,

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they are not available to Nationalist China. These settlements lie within the area where the Japanese made great efforts to increase coal production, and were connected to the sea during the war by a standard-guage railroad. The Ta-t'ung steel industry likewise may have coal available but the Pei-p'ing--T'ien-ching area and the exporting ports are cut off from these supplies.

C. Sources of Coal Supply for 1946

Successful industrial transition from war to peace depends upon the resumption of shipments approximating the pre-war flow of coal. The pre-war estimated flow from North China amounted to about 4,800,000 tons, of which 3,750,000 tons was sent to Central China and 350,000 tons to South China. Japan and Hong Kong received most of the remaining 700,000 tons. Manchuria also shipped at least a million tons to Central and South China and Hong Kong. Formosa, which exported coal to Japan is a potential source.

The following factors might offer some temporary relief to certain cities during the current shortage:

(1). At Kiirun, Formosa, 20,000 tons of coal are ready for shipment. In the Formosan interior there are possibly 160,000 more tons above ground.

(2). Manchurian coal stocks, particularly at Fu-shun, are reported to be large.

(3). With the installation of mine shaft timbers now being shipped from Japan, production at the Kailan Mining Administration near T'ang-shan, Hopeh Province, may be increased.

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(4). At Lao-yao, 80,000 tons are available for shipment.

(5). The 94th Army is holding 94,000 tons at T'ang-ku, Hopei Province.

The following table gives the estimated maximum coal production by province, 1948. Most of this production preceded the Japanese surrender and since that time production declined rapidly.

Province	Annual Production (tons)
Hopeh	6,750,000
Shantung	3,500,000
Szechuan	2,150,000
Shansi	1,250,000
Hunan	1,100,000
Honan	450,000
Kiangsu	450,000
Anhwei	250,000
Chekiang	250,000
Kansu	200,000
Kweichow	200,000
Shensi	200,000
Kiangsi	200,000
Yünnan	175,000
Chahar	150,000
Suiyüan	100,000
Kwangtung	90,000
Fukien	60,000
Ninghsia	50,000
Kwangsi	35,000
Sinkiang	25,000
Hupei	10,000
Formosa	2,500,000
Total	20,145,000

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North China is the most important coal-producing area of China. North China normally produces more than half of China's total, including nearly all of the coal used in coastal industrial cities. Four provinces, Hopeh, Shantung, Shansi, and Honan, produce 85 percent of North China's total. Mechanized mining is most highly developed in this area but even here many mining operations are handicapped by lack of mining machinery. Both bituminous and anthracite deposits occur, but 80 percent of North China's production is bituminous coal. Most of the anthracite comes from Hopei, Shansi, and Honan. In general, the North China bituminous coal, after washing, is of high quality.

D. Rehabilitation of Transportation for Emergency Movement of Coal

1. Railroads

Although very little of the rail mileage normally used for movement of coal to points of consumption has been destroyed, nearly all of the rail lines used have been cut and damaged more or less seriously in the past three months. The Pei-p'ing--Mukden Line is in through operation from the Kailan Mines near T'ang-shan to Ch'in-huang-tao, and from Pei-p'ing to T'ang-ku; the only other lines in through operation to coastal cities are those from Nan-ching and Hang-chou to Shanghai and from Canton to Kowloon. The Shantung and Lunghai lines to the major coal ports of Ch'ing-tao and Lao-yao have been cut in numerous places.

Fortunately most of the damage to lines of normal coal movements is no more serious than the removal of stretches of rails and ties, although extensive repairs will be necessary before coal from western Hopei and Shansi can move to its normal points of consumption.

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Rebuilding of the 210-mile gap in the Han-k'ou--Canton railway would help greatly in relieving the shortage in Canton and Hong Kong.

There is a serious shortage of locomotives and rolling stock. Wood for ties is inadequate, and almost no rails for rehabilitation are available. Grease, oil, and replacement parts are also urgently needed.16/

2. Coastal Shipping

Very little coastal shipping is available for the transport of coal.

16/ Appendix 5.

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SUMMARY OF RAILROAD REPAIRS NECESSARY FOR EMERGENCY MOVEMENT OF COAL

Name of Line	Total Mileage	Normal Annual Capacity	V-J Day Capacity in Tons	Present Condition Mileage Destroyed	Present Condition Mileage Damaged
Pei-p'ing--Suiyuan	505	3,500,000	3,500,000		about 50
Pei-p'ing--Mukden	527	4,500,000	4,500,000		about 50
T'ang-shan--Chin-huang-tao		6,000,000	6,000,000		
Pei-p'ing--Han-kou					
N of Yellow R.	421	4,300,000	4,300,000		about 100
S of Yellow R.	338	4,300,000	1,000,000		about 300*
T'ien-ching--Pu-k'ou	626	4,000,000	4,000,000		about 100
T'ai-yüan--Shih-chia-chuang	146	3,500,000	3,500,000		about 100
Shih-chia-chuang--Teh-chou	110	3,000,000	3,000,000		about 100
Tsi-nan--Ch'ing-tao	247	4,000,000	4,000,000		about 50
Lunghai					
E of Cheng-hsien	350	3,000,000	3,000,000		about 100
W of Cheng-hsien	426	3,000,000	1,500,000	140	
Han-k'ou--Canton	650	2,000,000	Service in N & S only	210	
Ping-hsiang--Chu-chou (W part of Chekiang-Kiangsi)	70	3,000,000	None	70	
Hunan--Kweichow	100	Never in operation	None	100	
TOTALS	4,305			520	950

*Road bed in poor condition. Other damaged sections have had rails and ties removed, but the roadbed is usually in fairly good condition.

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APPENDIX I

CHINA (22 PROVINCES) FOOD PRODUCTION, 1931 - 1937 AVERAGE*

(1,000 Metric Tons)

Province	Rice	Glutinous Rice	Kaoliang	Millet	Proso Millet	Corn	Soy Beans	Wheat
Chahar	17		252	202	77	[illegible]	37	135
Suiyüan			88	88	130	6	17	117
Ningsia	6	3	5	18	38	3	2	19
Chinghai				10	14	1		195
Kansu	4	3	106	201	235	124	38	371
Shensi	152	32	108	222	142	200	48	747
Shansi	3	2	486	768	209	278	88	934
Hopei	112	48	986	1,509	259	1,164	307	1,799
Shantung	9	11	1,903	1,815	265	792	1,551	3,532
Kiangsu	4,147	703	534	139	43	638	1,113	2,705
Anhwei	2,124	211	376	21	5	107	398	1,394
Honan	246	62	1,123	1,143	87	639	723	4,008
Hupeh	3,454	337	218	139	4	111	212	1,278
Szechuan	7,024	552	390	75	25	1,380	476	1,786
Hunan	1,587	136	41	29	7	346	229	303
Kweichow	1,083	195	38	30	10	256	119	247
Yunnan	4,790	328	31	11	2	65	83	266
Kiangsi	3,216	410	5	54	1	6	187	372
Chekiang	3,868	575	11	34	3	78	165	524
Fukien	2,115	203	1	36	1	2	84	280
Kwangtung	7,717	340	5	16	4	16	51	123
Kwangsi	3,286	253	28	20	5	197	98	228
TOTAL	44,919	4,404	6,909	6,551	1,556	6,402	6,003	20,419

* China Handbook, 1937 - 1943

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APPENDIX I - (Continued)

CHINA, (22 PROVINCES) FOOD PRODUCTION, 1931 - 1937 AVERAGE*

(1,000 Metric Tons)

Province	Barley	Field Peas	Broad Beans	Rape Seed	Sweet Potatoes	Peanuts	Sesame
Chahar	157	31	33	17	4		
Suiyüan	45	62	40	35			
Ningsia	9	22	1				
Chinghai	121	60	37	21			
Kansu	74	65	15	25	58		
Shansi	182	98	7	80	124	12	17
Shensi	149	135	51	53	150	10	21
Hopeh	342	55		32	1,505	420	101
Shantung	354	116	9	14	2,233	619	97
Kiangsu	1,334	293	337	16	1,915	313	86
Anhwei	513	198	86	16	400	113	77
Honan	730	413	22	8	3,253	265	230
Hupeh	1,019	305	326	140	652	97	86
Szechuan	1,354	694	715	610	2,545	272	43
Yünnan	154	117	460	52	165	12	2
Kweichow	203	73	77	98	101	45	6
Hunan	139	80	218	24	1,190	54	8
Kiangsi	157	69	116	28	656	82	40
Chekiang	337	83	259	193	797	28	6
Fukien	133	24	11	2	1,104	68	1
Kwangtung	111	40	23	4	1,943	161	3
Kwangsi	129	114	58	12	627	129	13
TOTAL	7,556	3,144	2,860	2,438	18,252	2,700	838

* China Handbook, 1937 - 1943

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APPENDIX 2

CURRENT FOOD SITUATION IN SELECTED PROVINCES AND CITY DISTRICTS IN CHINA*

A. Kwangtung

Kwangtung is the foremost rice-producing province of China, and ranked fourth in sweet potato production prior to the war. A recent report states that the 1945 rice crop amounted to 2 million metric tons; 1 million available now, and 1 million by the end of the year. The August grain harvest in the section between Canton and Hong Kong was not good, but supplementary foodstuffs represent an increase over last year's yield. Local crops in the area are represented as 75 percent of normal, but normal production would still fall far short of total requirements.

Recent reports indicate that food shortages are at the critical stage in many parts of the province. In normal years, Kwangtung imported nearly 2 million tons of rice, as well as wheat and flour. These imports are not available now.

Hong Kong, Macao, and Kuang-chou-wan are normally dependent upon foreign imports and neighboring parts of China. Previous to 1938, Hai-nan Island both imported and exported rice, but imports generally exceeded exports. The island normally had an exportable surplus of cattle, hogs, and poultry.

1. Canton

Food conditions are critical. The city district is reported to have a population of approximately 5 million, and

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* IRIS, R&A Map No. 8314

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crop producing areas are capable of producing only enough food to supply its requirements for four months of the year. The shortage has been aggravated by Japanese looting.

A reliable report in October (1945), states that the regional CNRR director established requirements of 30,000 to 60,000 metric tons of rice, needed for the Canton area in the next 3 months.

2. Shan-t'ou (Swatow)

Unrest in Shan-t'ou over the critical food shortage is pronounced. The city depends upon outside food imports, and recent Japanese looting has aggravated the situation. During the first week of September, the latter were also responsible for burning a large warehouse full of rice.

B. Fukien

Fukien does not produce enough rice to meet the requirements of the province; however this deficit is made up by the production of surplus of sweet potatoes. Normal rice harvests total 1,347,000 metric tons and sweet potatoes 1,546,900 metric tons.

1. Amoy

The city has a current population of about 70,000 people, and there is a market deficiency of foodstuffs. However, rice merchants claim that the Japanese have a store of rice sufficient to feed everyone for a year. They have been ordered to sell some at reasonable prices.

2. Fu-chou (Foochow)

No late information is available, but in June (1945), 16,218 metric tons of rice were reported stored at this port.

C. Kiangsi

In normal times Kiangsi produced 2,700,000 metric tons of rice annually, and exported 150,000 metric tons. Sweet potato production amounted to 500,000 metric tons and wheat 250,000 metric tons.

1. Chui-chiang (Kiukiang)

This is normally a transit market, but a report in October (1945) stated that there was an acute shortage owing to the demands of the Ninth War Area Service of Supply. The latter had already collected approximately 1,104 short tons of rice and had asked for twice that amount.

2. Han-chang

A recent report indicates that there are practically no food shortages within the area.

D. Chekiang

This province grows a surplus of rice, but is deficient in wheat and barley. Japanese looting has occured in several areas, and Hangchow had a shortage of rice and wheat in view according to a report in August (1945).

E. Anhuei

Crops in this province have been reported as the best in years. Wu-hu, a transit point, normally exports 99,800 to 249,500 metric tons of rice annually. About 250 metric tons of flour was produced in the district last year. There is no food shortage within the city, but prices are high on all foodstuffs.

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F. Kiangsu

1. Shanghai

The city of Shanghai has long been dependent upon its hinterland and foreign imports to supply its food requirements. The local diet consists largely of rice, cabbage, and other vegetables; vegetable oils, especially peanut oil; and some meat, mainly pork.

In early August (1945), it was reported that Shanghai was short of almost all types of foodstuffs, and that black markets were flourishing. Another report in late August (1945), stated that there had never been a shortage of grain, including rice, wheat and barley. The latest available information dated October 1945, stated that there was no food shortage in Shanghai, this same report indicates that crops in the Yangtze Valley were very good. Both rice and wheat were reportedly moving into Shanghai in sufficient quantity to meet the city's needs.

One month ago rice was not arriving at the Wu-hu transit area, from the Yangtze producing district due to (1) a transit tax imposed by the Communists in control of the producing areas, and (2) the farmers' reluctance to sell until prices become stable.

It is estimated that Shanghai with its present population of 4 million will require 25,000 metric tons of rice monthly. This is a per capita consumption of slightly less than half a pound daily, with the remainder of the diet supplemented by flour. Chinese food authorities have stated that the present harvest is sufficient to maintain these standards.

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At present, rising prices characterize the Shanghai food markets, but authorities feel that these are temporary and will be alleviated before long. A generally reliable source stated that flour in Shanghai was selling for CRB$140,000 per 50-pound bag in September. The establishment of an exchange rate of 200 CRB to 1 CN has increased the price of rice from CRB$1,300,000 to CRB$1,600,000 piculs thus depleting the monetary savings of the middle upper classes. Severe hardships are also imposed upon low-income and unemployed groups, and with the prices rising, buying in advance and hoarding is practiced. The result is an artificial shortage of food on the market. Shanghai authorities are planning to use UNRRA food shipments to assist in maintaining price control by selling on the open market.

Total food shipments by UNRRA into China at the port of Shanghai up to November 9th (1945) were as follows:

Wheat	39,588.5	long tons
Flour	16,916.6	" "
Misc. foods	903.0	" "
TOTAL	57,378.1	long tons

2. Nan-ching (Nanking)

In early November (1945) 10,000 tons of rice were being distributed to military personnel; the food supply for civilian consumption was reported as adequate and would remain so if transportation facilities from Wu-hu were maintained. At the time of the report there were 650,000 people in the city; Chinese authorities predicted that 150,000 refugees would soon arrive, but

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the municipal government has planned to provide for them. The city has taken over a total of 45,899 short tons of rice, wheat and wheat products, and soya beans from Japanese reserves.

G. Hunan

This province is normally referred to as the "rice bowl" of China, and nearly every district produces rice in surplus, or at least enough to meet local requirements. The Tung T'ing Lake area is the most productive in the province and annually exported approximately 249,500 metric tons of rice.

The current food supply in this area is far below normal. A report in June (1945) anticipated a shortage of food owing to withdrawal of large amounts of food by both the Chinese and Japanese armies. In addition, there are reliable reports of drought conditions. It was estimated that two-thirds of the normal rice crop might be harvested if the drought were not prolonged, and that irrigation would insure only one-third of the normal crop. The latter would be less than enough to supply the population of the area, and the normal surplus for export to surrounding deficit areas would be nonexistent.

In Ch'ang-sha, a report in October (1945) stated that there was enough food for the winter but that prices were "unreasonably high."

H. ~~Hopeh~~ HONAN

With the exception of the regions in the eastern part of the province which were flooded when the Yellow River dikes were destroyed, practically all the agricultural land is cultivated.

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However, from 30 to 50 percent of the work livestock has been killed or confiscated. This, along with the large number of Japanese and Chinese troops in the area, all of whom have to be fed, has considerably reduced the food stocks. There is no food surplus for export, and according to a recent account (October 1945) the region would be experiencing a famine if it were not for a good fall crop of millet, beans, and sweet potatoes.

I. Hupei

Spot information indicates that in general, insect ravages and drought may have materially reduced crop harvests this year.

J. Shensi

Reports from Shensi are somewhat varied in nature. One states that the scarcity of rain during the spring and summer resulted in poor crop harvests; "staples such as wheat and millet, as well as vegetables and fruits have been sorely hit."

According to reports from inspectors sent out by the provincial government, the less affected districts reaped about 35 percent normal harvest, while seriously stricken areas have a crop which is only 15 percent of normal. Sixty-two districts were reported as famine stricken, and about one-third of the population of the provinces were said to be suffering.

Later reports state that the famine conditions have been extremely exaggerated.

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K. Shansi-Suiyuan

In August (1945), a report stated that there was no excess of food in these areas for armies or civilians. Civilians were eating kaoliang, millet and a very little meat. Assorted vegetables were rather plentiful.

L. Kansu

Drought conditions were severe in the early summer, but some food was exported to Sinkiang. According to all indications the food supply is probably sufficient, but prices are high.

M. Kweichow

Crop reports state that harvests were smaller than the past year because of military operations and drought. However, the situation is not as serious as earlier reports indicated.

N. Yunnan

In general the food situation is good, but production was expected to be below last year's harvests.

O. Szechuan

The rice crop was much improved over last year's production; the food situation is reported as good.

P. Shantung

A report in late October (1945), stated that the crop harvest is the largest in recent years, but warned that the eastern peninsula might suffer from shortage if transportation routes by land and sea are not kept open. Early in March it was reported that about one-third of the population in the area had enough food, while

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two-thirds had barely enough. Prior to the war rather large imports of foreign rice were shipped into the region.

1. Ch'ing-tao (Tsingtao)

Japanese civilians in the area recently were reported to have a three to six month supply of food, while the Japanese army and navy had a four month supply.

2. Yen-tai (Chefoo)

After the liberation of Chefoo the municipal government issued upwards of 165 short tons of relief grain in one-half month.

Q. Hopeh

1. T'ien-ching (Tientsin)

The municipal government has taken over 8,000 metric tons of wheat and 420 metric tons of flour from the Japanese. These are presumably for the Chinese Army. A report in late October stated that there are enough private stocks to last through the winter. However, it would be necessary to open rail lines and roads which have been cut, or are held by political factions.

UNRRA has shipped about 10,000 tons of relief supplies to North China.

2. Pei-p'ing (Peiping)

Food stocks are ample at the present time (September 1945), due to the release of Japanese-held food reserves. If there is no interruption of transportation facilities food reserves should remain good. One recent report stated that food prices were dropping since the Japanese surrender.

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A P P E N D I X 3

CHINESE FOOD IMPORTS AND NORMAL SUPPLYING AREAS

A. Post-war Food Situation in Normal Surplus Areas

The prospects of immediate delivery of foodstuffs to China from Formosa, Indochina, Manchuria and Siam are poor. Recent intelligence indicates that these areas, which normally export surplus food items to China, are at the moment only capable of meeting their own requirements. Military operations have drastically curtailed agricultural production in these countries. Larger populations and the presence of occupation troops have also been important factors in the depletion of available food stocks.

Resumption of normal Chinese foreign imports is also contingent upon the settlement of political unrest and internal disturbances, and improvement of transportation facilities in the Far Eastern supplying areas.

1. Formosa

At the present time Formosa produces food sufficient only for domestic consumption. According to recent intelligence, Formosa has no food stocks available for immediate shipment; sugar seems to be the one exception. A report in September (1945) claims that 200,000 tons of sugar are available for export, but shipping accommodations are inadequate. Only 100,000 tons of sugar are expected to be available for export in 1946, owing to a decline of production acreage.

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Prior to the war the government successfully encouraged increased production of rice, Formosa's chief agricultural product. During the war, however, production deteriorated, and output has gradually declined. The decrease in rice production from 1938 through 1942 is illustrated as follows:

Formosan Rice Production
1938-1942

Year	Production (1000 metric tons)
1938	4,390
1939	4,070
1940	3,520
1941	3,630
1942	3,740

The drop in this year's production of rice is expected to be especially sharp due to (1) the lack of chemical fertilizer, (2) unseasonal weather, and (3) the neglect of crops due to military activities. Information concerning the success of the fall harvest is not yet available, but preliminary estimates place it at 65 percent of the pre-war normal, and since the arrival of Chinese occupation forces a greater strain is placed on the supply. Apparent food shortages are accentuated further by farmers who are withholding stocks in anticipation of rising prices and black marketing.

2. Indochina

China can expect, at the maximum, only token shipments of rice from Indochina, an important pre-war source of imports. Indochina was one of the principal rice-exporting countries, her pre-war yearly exports averaging about 1,500,000 tons. Wartime exports declined, and rice production decreased an estimated 25

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percent. Total rice exports dropped to 500,000 metric tons in 1944 and further declined to 61,000 metric tons in 1945.

In addition to reduced crop and transportation difficulties, Annamites discouraged the planting of rice and even burned stored paddy whenever possible. Large quantities of rice have not been harvested from the fields. Therefore, in view of present conditions, very little of the paddy will reach Cholon for milling. The transfer of Battambang to Siam also reduces the general supply of rice; it is an area which ordinarily produced rice in quantities sufficient for for export.

Cochinchina is apparently the only region in Indochina which will harvest a new rice crop sufficient to meet domestic requirements, including shipments to Northern Indochina where starvation conditions prevail. It is predicted that this area may even provide 15,000 metric tons for export, but most of the surplus will probably go to Malaya.

Before Japanese occupation, France was the principal market for Indochina's rice; now, Southeast Asia will probably absorb whatever surplus is produced in Indochina, once transportation and military problems are settled.

3. Manchuria

Information regarding the present food situation in Manchuria is meager. Pre-war Manchuria produced substantial surpluses of soybeans, kaoliang, millet, and corn. Average production figures for 1935-1938 are as follows:

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Average Production: 1935-1938
(1000 metric tons)

Soybeans	4,243
Kaoliang	4,349
Millet	3,129
Corn	2,130
Total	13,851

Beginning in 1939 and continuing throughout the war, the production of beans and other agricultural products declined rapidly. The reduction was not only the result of unfavorable climatic conditions and of labor and animal shortages but was caused by opposition to the stringent controls Japan placed upon Manchurian agriculture. Increased population together with decreased production have greatly reduced any surplus which/might be available for export to China Proper. However, it appears probable that Manchuria might have a sufficient amount of cereals and beans to supply small quantities to North China. The present political situation and the prevailing transportation difficulties do not present favorable conditions for large food exports. Information concerning the Russian occupation and its effects upon the available food stocks is not available.

otherwise

4. Siam

Rice available for export in Siam is far below the pre-war level. Prior to 1942, Siam ranked second only to Burma as an exporter of rice. Production, however, decreased during the war, while local demand increased. Normal rice production averaged more than 3,000,000 tons yearly. Reports indicate that during 1942-1944 production was only 80 percent of normal and that the 1945 figure will be only 65 percent of the normal production rate.

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This will result in a serious reduction of rice available for immediate export. Some authorities predict that the 1945-1946 harvests will make available a possible exportable surplus of 300,000 tons, others believe there will be a domestic deficit of at least 200,000 tons. Rice exports to China will probably consist of shipments made by the British into Hong Kong. Singapore and Hong Kong were Siam's largest pre-war purchasers, but they were superseded by Japan and her Empire after 1940. Today, Britain claims a priority upon Siam's reduced exportable surplus, for export to Singapore, Malaya, Borneo, and India. Although negotiations have not been completed, Britain is reportedly asking for 1,500,000 metric tons of rice as reparations payment, however, this quantity approximates Siam's pre-war annual exports and probably could not be supplied at present. The government of Siam is willing to give UNRRA 20,000 metric tons of rice a month, or a total of 240,000 tons in 1946, this amount might find its way to China. An unofficial preliminary recommendation of the Combined Food Board for the allocation of Siamese rice is as follows:

Malaya	45,000
Philippines	15,000
India	133,000
Hong Kong	45,000
UNRRA China	45,000
Borneo	4,800
NEI	30,000
Total	316,400

B. Future Prospects

Once the political, economic, and communication situations improve, China will undoubtedly be able to obtain a larger proportion of the food exported from Formosa, Manchuria, Siam, and Indochina, than she has received since 1936. Even though the total amount of food available for export from these countries may decline, China's

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share may be augmented if part of the large stocks formerly sent to Japan are diverted to China. Since 1940 Japan has been by far the principal market for foodstuffs exported from these four countries. Not only was she able to direct the flow of commodities into Japan by offering high prices, but in 1937 Japan imposed extensive controls over the exports of Formosa and Manchuria. Beginning in 1941, Japan also controlled the trade of Siam and Indochina.

The following tables list the principal Chinese food imports from Formosa, Indochina, and Siam for the period 1937 through August, 1941, and from Manchuria for the period 1936 through September, 1940. They are incomplete and useful only insofar as they indicate the quantity of food China may eventually hope to obtain from these countries. When conditions permit, China may look to Formosa for sugar, tea and rice; to Manchuria for soybeans, kaoliang, millet, and corn; and to Indochina and Siam for rice.

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China's Principal Food Imports from Formosa, Indochina and Siam
1937 - August, 1941*
(metric tons)

	1937	1938	1939	1940	January-August 1941
Formosa					
Sugar	16,246	1,886	71,541	49,347	27,928
Rice and paddy	n.r.**	442	4,093	2,600	n.r.
Beans and potatoes	n.r.	16	386	340	n.r.
Vegetables, processed	155	28	614	1,908	n.r.
Fruits, fresh	5,381	615	4,455	9,423	2,091
Tea	31	63	907	1,010	1,407
Indochina					
Corn	n.r.	1	20	49,454	(included in cereals misc.)
Rice and paddy	183,699	104,433	97,535	389,234	298,658
Bran	30,759	13,723	8,221	5,843	888
Cereals, misc.	n.r.	n.r.	n.r.	n.r.	42,644
Fish, processed	2,377	2,228	783	119	286
Siam					
Rice and paddy	110,114	181,953	135,884	177,903	125,956
Fish, processed	2,704	10,460	9,616	4,451	n.r.

* Statistics may or may not include imports into Kong Kong.
Sources: The Trade of China, 1937-1940; Monthly Returns of Foreign Trade of China, August, 1941; Compiled by Department of Commerce, Bureau of Foreign and Domestic Commerce, September 1942.

** No reports.

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China's Principal Food Imports From Manchuria
1936 - September, 1940*
(metric tons)

	1936	1937	1938	1939	January-September 1940
Barley	1,019	322	n.r.	n.r.	n.r.
Buckwheat	253	430	847	881	1,791
Kaoliang	99,590	41,149	135,764	75,500	15,728
Corn	99,572	56,091	70,726	99,782	20,767
Millet	7,778	14,181	57,523	82,718	6,440
Rice and paddy	942	2,106	n.r.	n.r.	n.r.
Cereals, others	69	222	n.r.	n.r.	n.r.
Bran, wheat, and others	1,157	441	n.r.	n.r.	n.r.
Flour, wheat, and others	105	5,661	n.r.	n.r.	n.r.
Soy Beans	153,931	65,140	112,169	87,801	15,404
Beans, others	68,366	12,887	26,234	18,859	25,842
Peanuts	4,607	6,361	6,120	1,173	1,790
Other pulse	n.r.	1,182	1,078	454	492
Vegetables, others (fresh and processed)	261	752	n.r.	n.r.	n.r.
Fruits, fresh	1,088	2,216	n.r.	n.r.	n.r.
Fish, fresh and processed	361	n.r.	n.r.	n.r.	n.r.
Salt	3,784	160	3,227	1,412	n.r.

*Sources: 1937 Annual Returns of Foreign Trade of Manchoukuo; Monthly Returns of Foreign Trade of Manchoukuo, 1938 - September 1940.

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A P P E N D I X 4

CURRENT MINING CONDITIONS IN CHINA

The major centers of coal production are:

Location	Type of coal
T'ang-shan Area, Hopeh	Bituminous
Kan-t'ou-sun, Cent. Hopeh	Bituminous
Feng-shan-chuan, Hopeh	Bituminous
An-yang District, Honan	Bituminous
Ch'iao-t'ou-ts'un, Honan	Anthracite
Men-t'ou-kou, Hopeh	Anthracite
Tsao-chuang, Southern Shantung	Bituminous
Northern Shantung	Bituminous
Northern Shansi	Bituminous
Yang-ch'uan, Shansi	Anthracite

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Most of the production of Szechuan Provinces (2,150,000 tons a year) comes from the vicinity of Wei-yüan. The production of coal for industrial purposes in other southern provinces is negligible.

Estimated 1945 coal production shows a general decline. Political disturbances in much of China's coal producing region, disruption of transportation, and insufficient and obsolete machinery, are responsible for this decline.

A. Mining Conditions by Areas

1. The Kailan Mining Administration

Five collieries, Lin-hsi, T'ang-shan, Chao-ko-chuang, T'ang-chia-chuang, and Ma-ch'iao-k'ou are the largest producers in China. A substantial part of their output is used by the railroads and factories of North China. The coal, when washed, makes a very good metallurgical coke and was in the past a major source of supply for the Japanese iron and steel industry. The mines are highly mechanized, but recently maintenance difficulties have been reported. There is a great deal of water in the mines especially during the rainy season. The rail haul to port from these mines is short--about 80 miles to Ch'in-huang-tao.

Production of coal at the Kailan mines during 1944 is variously estimated at 3,000,000 to 7,000,000 tons. Efforts to increase production were made by the Japanese but it is believed that they did not meet with great success. Continuous labor trouble at the mines has been reported. This difficulty, together with lack of transportation facilities, tends to substantiate the lower

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production estimates. If proper transportation for this coal can be found, some of the coal production originally diverted to Japan may be used in China. Production at these mines will probably continue to decline until the labor troubles are settled and adequate timber is imported for mine shafts.

Flooding is a serious problem at the large Men-t'ou-kou mine of Hopeh Province. Civil dissension has made operation difficult.

2. The Chung-hsing Mines of Shantung

The Chung-hsing mines near Tsao-chuang are second in importance to those of Kailan. Although the mines have modern equipment, they are subject to interruption through mechanical failure. Occasional flooding has caused decreased production.

3. Po-shan and Szechuan Mines of Shantung

The following factors have reduced production capacity at these mines:

a. Shortage of new or replacement machinery.

b. Increasing inadequacy of transportation facilities.

c. Shortage of timbers for mine shafts.

d. Deterioration of equipment operated under Japanese management during the war, and failure to replace this equipment.

e. Water in mines.

4. Shansi Province

Because of lack of transportation, it has been difficult to continue operation of the Shou-yang mines. In addition, drainage

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facilities are inadequate. Communist activity has hampered operations of the Tung-shan, Chieh-hsiu, Hung-tung, and the Hsien-kang mines of Shansi Province. Guerilla activity has often been responsible for flooding, explosions, collapse, and lack of transportation.

5. Honan Province

These mines have suffered a reduction in output and in some cases have stopped production altogether. Operation of the mines at Chiao-tso, Honan, stopped 1 April 1945. There is little hope of the mines reopening quickly owing to intensive bombing. Failure to replace pumping machinery has caused and will continue to cause a reduction or stoppage of production in many of the mines in Honan Province.

6. Anhuei Province

Anhuei Province formerly produced much more than the current estimate of 250,000 tons a year. The Ta-t'ung mine of Anhuei (not to be confused with the mines in northern Shansi by the same name, nor with the town of Ta-t'ung about 120 miles to the south on the Yangtze) has suffered a reduction in production. The following factors are responsible for decline in production in these mines:

a. Shortage of rail transport.

b. Pumping plant in bad repair.

c. Bad ventilation. Fire damp has forced abandonment of sections of the mine.

B. Total Pre-war Coal Consumption

Estimates of coal consumption in China during the 1930s have varied considerably. The following table shows quantities of coal used in 1937 for different purposes, in thousands of tons.

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COAL USED IN 1937

Use	China Proper	Manchuria	Formosa	Hong Kong
Mining and metallurgy	1,595	866	993	311
Other industrial	4,500	783		
Electric power (total)	1,500	243	45	51
Railways	1,750	1,116	150	15
Shipping	1,100	870	338	451
Domestic commercial	10,500	1,274	-	-
Total	20,945	4,151	1,526	868

The following table shows surplus and deficit areas for 1937:

Region	Surplus or Deficit
Manchuria	+ 4,500,000 tons
North China	+ 4,800,000
Central China	- 5,000,000
Southeast Coast	-600,000
Formosa	+ 500,000
Hong Kong	- 900,000
Northwestern China	-100,000
Southwestern China	+ 60,000

Central China's peace time needs were met by shipments of about 3,750,000 tons from North China, 1,000,000 tons from Manchuria, and 250,000 tons from Japan and French Indo-China. South China needs were met by shipments of about 350,000 tons from North China and 250,000 tons from other sources including Japan and French Indochina. Of Coastal China, Shanghai, Canton, Han-k'ou (Hankow), Yen-t'ai (Chefoo) and Shan-t'ou (Swatow) were the chief importing cities.

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APPENDIX 5

PRESENT STATUS OF TRANSPORTATION IN CHINA

A. Rail, Highway, and River Transport

The area north of the Yangtze and East of the Yellow River bend depends heavily on railroads for bulk transportation. This is especially true now that long stretches of the Grand Canal are not navigable through neglect. Under normal conditions, the rail network in this area, supplemented by waterways and local roads, is adequate for nearly all distribution requirements. During Japanese occupation waterways were heavily used but were not greatly improved. However, several through roads were developed for heavy motor traffic. Guerrilla activity since Japan's surrender has cut service on all through rail routes; railroad damage in this area consists of the tearing up of stretches of rails, the burning of ties, and the blowing up of a number of bridges.

Through west-east traffic to the coast has halted on all lines north of the Yangtze, although the short, heavy-capacity line from Peip'ing to T'ang-ku is operating on a fairly regular schedule. Coal movements on the Shantung Line (Chi-nan--Ch'ing-tao) have ceased entirely, and stretches of track have been reported torn up on the Lung-hai between Hsü-chou and Tung-hai.

The main north-south lines have also suspended through traffic. Trains on the Tsin-pu Line (T'ien-ching--Pu-k'ou) are operating on only short stretches and these are chiefly in the extreme north and the extreme south. The Ping-han Line (Peip'ing--Han-k'ou),

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paralleling the Tsin-pu farther inland, is in limited operation from Peip'ing to Pao-ting, and from the Yellow River to Hsin-yang. The remaining portions of this line have been cut on several occasions by sporadic fighting.

Major destruction in recent months includes the tearing up of most of the trackage of the Shih-te Line (Shih-chia-chuang--Teh-chou) and extensive track removal of the Shantung, Lunghai, and Chengtai lines. The number of bridges damaged and destroyed cannot be estimated at this time.

South of the Yangtze, and in the Yangtze Valley itself, bulk transport has been by water since time immemorial. According to one pre-war estimate, one half of China's freight was moved on the Yangtze, and the Hsi Chiang (West River) was the most important transportation route in Kwangtung and Kwangsi. Smaller rivers serve the southeastern provinces, while nearly all large cities as far inland as Chungking depend on rivers for at least a portion of their freight and passenger traffic. Present traffic on waterways is limited by the lack of coastal and river steamers, and to a lesser degree, by the slight reduction in the number of small river craft.

At the outbreak of the war with Japan, a railway building program had just gotten under way to connect Hang-chou, Nan-chang, Changsha, Kweilin, and Kweichu (Kweiyang); and a north-south line connecting Han-k'ou and Canton was completed and in operation for a brief period before the Japanese drove into southern China. The only southern rail lines now in regular operation are the Shanghai-Nan-ching--Wu-hu Line, the Shanghai--Hang-chou Line, the Canton-Kowloon

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Line, and portions of the Han-kou--Canton Line and of the Hunan-Kwangsi Line (Hengyan to Kweichu via Maping).

A network of trunk highways is being developed connecting Kunming and Chungking with the Han-k'ou--Canton Railway. Except for a few stretches, most of these highways are already suitable for truck traffic. Additional highways extend northeast into Kiangsi and Chekiang, but the roads in the coastal portions of Chekiang, Fukien, and Kuangtung were completely destroyed during the war. The truck situation in Shanghai has been reported as satisfactory, but vehicles, gasoline, and spare parts are inadequate elsewhere.

Most portions of western China depend on highway transportation, with cargo carried by truck, cart, pony, and camel. The upper reaches of the Yellow and Yangtze rivers, together with their larger tributaries, are also extensively used. During the war, the airplane was used for bulk transport, and it is likely that an air freight service of limited capacity will be continued in peacetime. By far the most economical and reliable through route to the coast is down the Yangtze River.

At present the condition of the highways in western China is fairly good, permitting heavy truck traffic between the major cities. With the departure of American engineers, constant heavy traffic will damage highways unless efficient repair work can be continued.

B. Ports

Although fairly well supplied with harbors, which deep-draft vessels may enter, the coast of China has few ports with both adequate harbor facilities and high-capacity routes to the interior. The ports

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of Chin-huang-tao, T'ien-ching--Ta-ku, Ch'ing-tao, Shanghai, and Hong Kong are the only ports meeting both requirements; of these Shanghai and Ch'ing-tao are most suitable for use by American Victory and Liberty ships. The ports of Lao-yao, Yen-tai, Wei-hai-wei, Wen-chou, Amoy, Shan-t'ou, Fu-chou, San-tu-ao, and the Yangtze river ports of Nan-ching, Wu-hu, Chiu-chiang, and Han-k'ou are all usable by large steamers, but are of less value than the ports named above because of silting, war damage, inadequate harbor facilities, lack of routes to the hinterland, or seasonal variations in depth of water.

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CHINESE PORTS: DEPTHS, EQUIPMENT, AND CONDITION

Port (N to S)	Vessels Accommodated	Cargoe Handling	Connections to Interior	Remarks
Chin-huang-tao	21-26' draft	4 cranes available. Cargo can be discharged directly into RR cars. Coolie loading.	Pei-p'ing--Mukden Railroad.	Ice may be present January-February. Main port for export of coal from Kailan mines.
T'ien-ching-Ta-ku	Vessels over 20' draft use new pier off Ta-ku(300' or less in length). Those under 20' may normally proceed to T'ien-ching; river silted at present.	Ship's gear and coolies. Lighters available.	Pei-p'ing--Mukden Railroad;excellent highway to Pei-p'ing.	Ice in January; dredging needed.
Yen-tai	20' draft in inner harbor.	Lighters.	Highway only.	Use may be limited by control by rival political group.
Wei-hai-wei	16' draft at any stage of tide; W entrance by vessels of any draft.	Lighters.	Highway only.	
Ch'ing-tao	30' draft; 21' to 28' along wharves	Tugs, lighters, 3 floating cranes.	Shantung Railroad; highway.	Best port N of Yangtze.

* Coolie labor is used at all Chinese ports, and is always available. Lighter capacity averages 30 tons. Junks are often used as lighters, and cargo is often loaded directly into junks or river steamers for transshipment by canal or inland waterway.

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Lao-yao	10' to 17' draft.	Tugs; coal-loading tower.	Lunghai Railroad.	Badly silted.
Shanghai	Up to 35'.	Lighters, barges, native craft. Travelling cranes. Special gasoline and fuel oil barges.	Railroads to Nan-ching and Hang-chou; highways. Grand Canal NW and S.	Best equipped port in China.
Wen-chou	Up to 18'.	Lighters.	Secondard highway.	Recently silted.
San-tu-ao	Any draft.	Ship's tackle. Must transship to coastal vessels.	Trails.	Safe, deep harbor which may be used until Fu-chou is improved.
Fu-chou	17' to 20' (pre-war).	Ship's tackle. Transship to river craft.	Highway being repaired; Min river.	
Amoy	30' draft. Less than 500' in length.	Movable hand crane.	Highway.	
Shan-t'ou	20' draft. Deeper during spring tides.	No cargo facilities for deep-draft vessels; ship's gear; lighters.	Poor roads, rivers.	
Hong Kong	Up to 35'.	Lighters; travelling cranes.	Railroad to Canton, river, highway.	
Nan-ching	Any draft vessel; depths 23' to 60'.	Lighters.	Railroad (P'u-k'ou side) to T'ien-ching; highway; Yangtze river.	
Wu-hu	Up to 23'.	Lighters, launches.	Highway, river. Main river port.	

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Chiu-chiang	Up to 20'.	Lighters.	Waterways southward.	Important oil port.
Han-k'ou	27' at high water .	Lighters, tugs.	Railroad N and S. River W and S.	

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Inland waterways are used for bulk transport to a far greater degree in China than in the United States; waterways with rapids and rocks, which would be considered unnavigable by American standards, often must serve as main routes in west China. On such streams, rafts made of inflated goat or ox skins are used, or cargo is carried by coolies overland to detour the rapids.

Except on the Yangtze and West Rivers, water transport is mainly by small native craft, sometimes carrying only 3 or 4 tons, but the number of craft used is so large that the overall total is quite considerable.

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APPENDIX 6

REHABILITATION OF TRANSPORTATION IN CHINA

A. Railroads

Damage to railroad lines varies from the removal of rails and ties to almost complete destruction of roadbed, bridges, and tunnels. On a 100-mile stretch of the Canton-Han-k'ou line, practically nothing usable has been left, and the entire Chekiang-Kiangsi line (about 500 miles) has also been almost completely destroyed. In other cases, numerous trenches have been dug across roadbeds. Generally, however, only rails and ties have been removed and destroyed. Even without deliberate destruction, roadbeds and tracks have suffered serious damage from lack of proper maintenance.

More than 2000 miles of rails and ties will have to be supplied to restore lines that have been destroyed, and a large additional quantity will be required to put the whole railroad system in good condition. Highest priority needs in the distribution of food, and especially coal, require the restoration of about 1000 miles of line. The Chinese standard rail weighs 85 pounds per yard, or 150 tons per mile of single track, and ties are spaced about 2060 to the mile. With a reasonable allowance for sidings and extra tracks, 1,000 miles of line will require 160,000 tons of rails and accessories, and 2,200,000 ties. Requirements for bridge reconstruction cannot be estimated, but will probably total several thousand tons of structural steel. Nearly all of the steel and most of the ties will

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have to be imported.

Practically all the locomotives remaining in Chinese hands at the time of the Japanese surrender were in very bad condition; most of them are reported to be beyond repair. About 1,500 locomotives were taken over from the Japanese in China. About one fourth of these need extensive repairs; the few locomotives still in Chinese hands at the close of the war are in extremely bad condition, and in any case the total number is scarcely sufficient to operate existing railroads effectively. If motive power were taken from other lines, it could be used to handle the most urgent movements of food and coal over 1,000 miles of restored track, but such a solution would create other serious problems. At least 250 new locomotives should be provided as soon as possible, and another 500 will be needed in the near future.

Rolling stock other than locomotives is probably sufficient for the most immediate needs of food and coal distribution, provided that all such stock is pooled for this purpose. Most of the freight cars, however, are in poor condition due to lack of maintenance, and many replacements will be necessary within the next few years. At present there are about 15,000 usable freight cars in China. New demands and the replacement of worn-out stock will probably require 10,000 new cars in the next five years.

Whatever provisions may be made to rebuild essential railroad lines and supply the necessary motive power and rolling stock will not be effective without adequate maintenance and properly trained personnel. Lubricating oils and grease, and spare repair parts

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have been almost completely lacking, and the number of skilled mechanics and technical personnel is woefully inadequate. These deficiencies must be remedied promptly. Technical assistance should be made available to help the Chinese in the present emergency, as well as in the training of workers for the future.

B. Highways

The rudimentary stage of development of China's highway system and the small number of motor vehicles available, preclude any extensive use of such facilities in the regional movement of food and coal. Effective employment of the few available motor trucks could, if properly planned and managed, be of considerable value in the local distribution of food. Even this, however, will require a marked improvement and expansion of existing repair and service facilities, and the provision of adequate supplies of fuel. Any other use of highways in a program designed to relieve regional distress, must wait upon long-term developments.

C. Shipping

Waterways played a leading part in the bulk movement of goods in China before the war, and can be of major importance in the emergency distribution of food and coal. Shipping losses have been very heavy in all the larger types of vessels, but smaller up-river and canal craft have been affected to only a minor extent.

The most urgent need is the restoration of coastwise and of Yangtze River traffic to at least a considerable part of their former importance. If half of the former tonnage in each of these types of shipping be taken as the immediate goal, approximately 500,000 tons of coastwise vessels (which can also use the lower Yangtze), and not less

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than 100,000 tons of new river steamers, will be required.

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INTERIM RESEARCH AND INTELLIGENCE SERVICE
Research and Analysis Branch

DEPARTMENT OF STATE
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R & A No. 3433

CURRENT FOOD, COAL, AND TRANSPORTATION SITUATION PREVAILING IN CHINA

Description

Situation in respect to present food and coal stocks; analysis of current status of transportation facilities for balancing surplus and deficit areas; comparison with pre-war condition; and estimates of imports and rehabilitation necessary to bring about a condition comparable to pre-war standards.

2 January 1946

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FREE

CHINA
FOOD SURPLUSES AND DEFICIENCIES

CURRENT SITUATION[1]

- CRITICAL SHORTAGE
- GENERAL DEFICIENCY
- REGION OF SELF-SUFFICIENCY
- SURPLUS

NORMAL REGIONAL SITUATION[2]*

- DEFICIENCY
- IMPORTS GREATER THAN EXPORTS
- SURPLUS
- EXPORTS GREATER THAN IMPORTS

APPROXIMATE DIRECTION OF FOOD MOVEMENT

NOTE. (1) CURRENT FOOD SITUATION BY PROVINCE BASED UPON MOST RECENT AVAILABLE INFORMATION. BROKEN LINE BOUNDARIES ENCLOSE APPROXIMATE AREAS WHERE RECENT SPOT INFORMATION PERMITTED MORE SPECIFIC ANALYSIS.

(2) WU CHUAN-CHUN, CHINA'S FOOD GEOGRAPHY, 1943.

* SIZE OF CIRCLES REPRESENT RELATIVE IMPORTANCE OF CONDITION.

ROADS

- ALL-WEATHER
- MOTORABLE
- CONDITION UNCERTAIN

RAILROADS

- SINGLE TRACK STANDARD GAUGE, IN OPERATION
- DOUBLE TRACK STANDARD GAUGE, IN OPERATION
- STANDARD GAUGE, INOPERABLE
- NARROW GAUGE, IN OPERATION
- NARROW GAUGE, INOPERABLE
- X SERVICE INTERRUPTED
- XXX TRACK DISRUPTED

WATERWAYS*

- 1 NAVIGABLE FOR OCEAN STEAMSHIP
- 2 NAVIGABLE FOR BULK TRANSPORT
- 3 NAVIGABLE FOR SMALL BOAT ONLY (MAXIMUM CAPACITY APPROXIMATELY 20 TON)
- UNNAVIGABLE
- CANAL
- MAJOR PORT
- MINOR PORT

*NOTE: CONDITION OF BRIDGES AND OTHER RIVER CROSSINGS NOT SHOWN

URBAN CENTERS

- NATIONAL CAPITAL
- PROVINCIAL CAPITAL
- OTHER CITY OR TOWN

BOUNDARIES: INTERNATIONAL — PROVINCIAL

0 40 80 120 160 200 MILES

0 40 80 120 160 200 KILOMETERS

CHAHAR
MANCHURIA
SUI-YÜAN
KOREA
HOPEH
PO HAI
(GULF OF CHIHLI)
MANCHURIA FOOD EXPORTS TO CHINA
LIAO-TUNG -WAN
NISHI-CHŌSEN -WAN
SHANSI
SHANTUNG
LAI-CHOU WAN
HUANG HAI
(YELLOW SEA)
KANSU
TSINGHAI
SHENSI
HONAN
ANHUEI
SZECHUAN
HUPEI
KOREA EXPORTS FOOD TO CHINA AND JAPAN

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FREE

CHINA
FOOD SURPLUSES AND DEFICIENCIES

CURRENT SITUATION[1]

- CRITICAL SHORTAGE
- GENERAL DEFICIENCY
- REGION OF SELF-SUFFICIENCY
- SURPLUS

NORMAL REGIONAL SITUATION[2]*

- DEFICIENCY
- IMPORTS GREATER THAN EXPORTS
- SURPLUS
- EXPORTS GREATER THAN IMPORTS

APPROXIMATE DIRECTION OF FOOD MOVEMENT

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- MOTORABLE
- CONDITION UNCERTAIN

RAILROADS

- SINGLE TRACK STANDARD GAUGE, IN OPERATION
- DOUBLE TRACK STANDARD GAUGE, IN OPERATION
- STANDARD GAUGE, INOPERABLE
- NARROW GAUGE, IN OPERATION
- NARROW GAUGE, INOPERABLE
- X SERVICE INTERRUPTED
- XXX TRACK DISRUPTED

WATERWAYS*

- 1 NAVIGABLE FOR OCEAN STEAMSHIP
- 2 NAVIGABLE FOR BULK TRANSPORT
- 3 NAVIGABLE FOR SMALL BOAT ONLY (MAXIMUM CAPACITY APPROXIMATELY 20 TON)
- UNNAVIGABLE
- CANAL
- MAJOR PORT
- MINOR PORT

*NOTE: CONDITION OF BRIDGES AND OTHER RIVER CROSSINGS NOT SHOWN

URBAN CENTERS

- NATIONAL CAPITAL
- PROVINCIAL CAPITAL
- OTHER CITY OR TOWN

BOUNDARIES: INTERNATIONAL — PROVINCIAL

0 40 80 120 160 200 MILES

0 40 80 120 160 200 KILOMETERS

CHAHAR
MANCHURIA
SUI-YUAN
LIAO-TUNG -WAN
PO HAI
HOPEH
(PEKING)
(TIENTSIN)
PO-HAI WAN
(GULF OF CHIHLI)
MANCHURIA FOOD EXPORTS TO CHINA
NISHI-CHŌSEN -WAN
SHANSI
LAI-CHOU WAN
SHANTUNG
HUANG HAI
(YELLOW SEA)
TSINGHAI
KANSU
SHENSI
HONAN
SZECHUAN
HUPEI
ANHUEI
KIANGSU
CHEKIANG
NANKING
SHANGHAI
HANKOW
CHANGSHA
NANCHANG
FOOCHOW
CANTON
HONGKONG
AMOY
SWATOW
KWEILIN
NANNING
HAINAN
KWEICHOW
YUNNAN
KWANGSI
KWANGTUNG
FUKIEN
TAIWAN
(FORMOSA)
KIRIN
HEILUNGKIANG
JEHOL
INNER MONGOLIA
OUTER MONGOLIA
SINKIANG
TIBET
KOREA
JAPAN AND CHINA TO EXPORTS

110° 112° 114° 116° 118° 120° 122° 124° 126°
42° 40° 38° 36° 34° 32°
102° 104° 106° 108°

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SIKANG
KWEICHOW
HUNAN
KIANGSI
FUKIEN
YUNNAN
KWANGSI
KWANGTUNG
INDOCHINA
SIAM
FORMOSA
TUNG HAI
(EAST CHINA SEA)
TAIWAN HAISHIA
(FORMOSA STRAIT)
TUNGCHING WAN
(GULF OF TONKIN)
HAI-NAN TAO
NAN HAI
(SOUTH CHINA SEA)
BŌKO-RETTŌ
(THE PESCADORES)
INDOCHINA FOOD EXPORTS TO CHINA
SIAM FOOD EXPORTS TO CHINA
K'UN-MING (YÜNNANFU)
KUEI-LIN (KWEILIN)
KUEI-CHU (KWEIYANG)
NAN-CHENG
CH'ANG-SHA
CHEN-CHI
FU-CHOU (FOOCHOW)
HANOI
HAIPHONG
VINH
KOWLOON
HONG KONG
VICTORIA
TAINAN
TAICHŪ
TAITŌ
TAKAO
KARENKŌ
KIIRUN
SUŌ
MAKO

RELIABILITY OF DATA

DATA	QUAN	QUAL	LOC
ROADS		GR-I	NE
RAILROADS	GR-I	GR-I	NE
X xxx		GR-I	OA
PORTS		R-I	NF
WATERWAYS		GR-I	NE
FOOD DATA	GR-I		OA

Quantitative & Qualitative Data
R - Reliable
GR - Generally Reliable
U - Unreliable
Coverage of Data
C - Complete
I - Incomplete
Location of Data
A - Accurate
NE - Not Entirely Accurate
OA - Only Approx. Accurate

QUANTITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's quantitative data, the data which are measurable, including economic or population statistics, hypsometric data, the width of roads, gauges of railroads, etc.

QUALITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's qualitative data which shows the types of road surfaces, character of beaches, types of terrain, etc.

COVERAGE. The letters C and I in combination with R, GR, or U are an estimate of the degree of completeness of quantitative and qualitative data.

LOCATIONAL DATA. The letters A, NE, and OA are estimates of the plotted accuracy of data within the limits of scale and width of line.

CHINA FOOD IMPORTS
(IN 1,000 METRIC TONS)

NAME OF PRODUCT	ESTIMATED MINIMUM IMPORT REQUIREMENTS, JULY 1945 - JUNE 1946* (CHINA & MANCHURIA)	PREWAR IMPORTS AVERAGE, 1931-1937 (NOT INCLUDING MANCHURIA)**
RICE	750	816.5
WHEAT	500	644.5
FLOUR	...	152.5
BEANS	100	4.1 (INC. PEAS)
MILK	10	....
CONDENSED	...	2.4
CREAM	...	1.6
SUGAR	45	....
FISH AND MEAT	50	....
FRUIT		
FRESH	15	....
DRIED	4	....
VEGETABLES, DRIED	5	....
FATS AND OILS	21	....
COCONUT OIL	...	3.6
BUTTER	...	0.6
MARGARINE	...	0.2
TOTAL	1,500	1,725.5

*ESTIMATED BY OWEN L. DAWSON, AGRICULTURAL ATTACHE, AMERICAN EMBASSY, CHUNGKING, CHINA, SEPTEMBER 27, 1945.

**CHINESE MARITIME CUSTOMS RETURNS.

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31 DECEMBER 1945

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RELIABILITY OF DATA

DATA	QUAN.	QUAL.	LOC.
ROADS		GR-I	NE
RAILROADS	GR-I	GR-I	NE
X xxx		GR-I	OA
WATERWAYS		GR-I	NE
PORTS		R-I	NE
COAL PRODUCING AREA	GR-I		OA
COAL USE AREA	GR-I	GR-I	NE
COAL SUPPLY ROUTE	GR-I		NE

Quantitative & Qualitative Data
R - Reliable
GR - Generally Reliable
U - Unreliable

Coverage of Data
C - Complete
I - Incomplete

Location of Data
A - Accurate
NE - Not Entirely Accurate
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QUANTITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's quantitative data, the data which are represented numerically, including statistics, approximate data, the width of roads, groups of numerals, etc.

QUALITATIVE DATA. The letters R, GR, and U are an estimate of the reliability of the map's qualitative data which shows the types of road surfaces, alignment of beaches, types of terrain, etc.

COVERAGE. The letters C and I in combination with R, GR, or U are an estimate of the degree of completeness of cultivation and qualitative data.

LOCATIONAL DATA. The letters A, NE, and OA are estimates of the claimed accuracy of data within the limits of scale and width of line.

ESTIMATED COAL PRODUCTION (1945)

PROVINCE	TONS PER ANNUM
1. HOPEH	6,750,000
2. SHANTUNG	3,500,000
3. SZECHUAN	2,150,000
4. SHANSI	1,250,000
5. HUNAN	1,100,000
6. HONAN	450,000
7. KIANGSU	450,000
8. ANHUEI	250,000
9. CHEKIANG	250,000
10. KANSU	200,000
11. KWEICHOW	200,000
12. SHENSI	200,000
13. KIANGSI	200,000
14. YÜNNAN	175,000
15. CHAHAR	150,000
16. SUIYÜAN	100,000
17. KWANGTUNG	90,000
18. FUKIEN	60,000
19. NINGHSIA	50,000
20. KUANGSI	35,000
21. SIKANG	25,000
22. HUPEI	10,000
FORMOSA	2,500,000

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PROVISIONAL EDITION

FREE

CHINA
COAL PRODUCTION AND CONSUMPTION

COAL PRODUCED PER ANNUM BY AREAS
(IN METRIC TONS)

2,500,000 (AND ABOVE)
1,500,000-2,499,999
1,000,000-1,499,999
250,000-999,999
100,000-249,999
50,000-99,999

IMPORTANT COAL USE AREAS

INDUSTRIAL CENTER
- PRIMARY INDUSTRIAL AREA WITH COAL SUFFICIENCY
- PRIMARY INDUSTRIAL AREA WITH COAL DEFICIENCY
- SECONDARY INDUSTRIAL AREA WITH COAL SUFFICIENCY
- SECONDARY INDUSTRIAL AREA WITH COAL DEFICIENCY

NON-INDUSTRIAL CENTER
- COAL SUFFICIENCY
- COAL DEFICIENCY

NORMAL AND POTENTIAL ROUTES OF COAL SUPPLY

BOUNDARIES: INTERNATIONAL — PROVINCIAL

0 40 80 120 160 200 MILES
0 40 80 120 160 200 KILOMETERS

ROADS
- ALL-WEATHER
- MOTORABLE
- CONDITION UNCERTAIN

RAILROADS
- SINGLE TRACK STANDARD GAUGE, IN OPERATION
- DOUBLE TRACK STANDARD GAUGE, IN OPERATION
- STANDARD GAUGE, INOPERABLE
- NARROW GAUGE, IN OPERATION
- NARROW GAUGE, INOPERABLE
- X SERVICE INTERRUPTED
- XXX TRACK DISRUPTED

WATERWAYS*
- 1 NAVIGABLE FOR OCEAN STEAMSHIP
- 2 NAVIGABLE FOR BULK TRANSPORT
- 3 NAVIGABLE FOR SMALL BOAT ONLY (MAXIMUM CAPACITY APPROXIMATELY 20 TON)
- UNNAVIGABLE
- CANAL
- MAJOR PORT
- MINOR PORT

*NOTE: CONDITION OF BRIDGES AND OTHER RIVER CROSSINGS NOT SHOWN

URBAN CENTERS
- NATIONAL CAPITAL
- PROVINCIAL CAPITAL
- OTHER CITY OR TOWN

CHAHAR
MANCHURIA
SUI-YUAN
HOPEH
PO HAI
(GULF OF CHIHLI)
SHANSI
SHANTUNG
KANSU
SHENSI
HONAN
SZECHUAN
HUPEI
ANHUEI
LIAO-TUNG-WAN
LAI-CHOU WAN
NISHI-CHŌSEN-WAN
HUANG HAI
(YELLOW SEA)
TSINGHAI
KOREA
JAPAN COAL EXPORTS TO CHINA

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SIKANG

KWEICHOW

HUNAN

KIANGSI

CHEKIANG

FUKIEN

KWANGSI

KWANGTUNG

YÜNNAN

INDOCHINA

SIAM

TUNG HAI
(EAST CHINA SEA)

TAIWAN STRAIT
(FORMOSA STRAIT)

FORMOSA

BÖKO-RETTÖ
(THE PESCADORES)

TUNGCHING WAN
(GULF OF
TONKIN)

HAI-NAN
TAO

NAN HAI
(SOUTH CHINA SEA)

CH'UNG-CH'ING
(CHUNGKING)

KWEI-CHU
(KWEIYANG)

K'UN-MING
(KUNGMING)

KUEI-LIN
(KWEILIN)

FU-CHOU
(FOOCHOW)

HUAI-NING
(ANKING)

HANOI

HAIPHONG

NAM DINH

VINH

SAN-YO

HSU-WEN

HAI-K'ANG

MANDARIN BAY

PEI HAI WAN

ON-PO WAN

DEEP BAY

KOWLOON
HONG KONG
VICTORIA

TAINAN

TAKAO

TAI TÖ

MAKO

INDOCHINA COAL EXPORTS TO CHINA

INDIA, AUSTRALIA, NEW ZEALAND COAL EXPORTS

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FORMOSA	2,500,000

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X XXX		GR-I	OA
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PORTS		R-I	NE
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KWEICHOW

HUNAN

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CHEKIANG

FUKIEN

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KWANGSI

KWANGTUNG

INDOCHINA

SIAM

TUNG HAI
(EAST CHINA SEA)

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(FOOCHOW)

CH'ANG-SHA

NAN-CH'ANG

HANOI

HAIPHONG

KOWLOON
HONG KONG
VICTORIA

TAINAN

TAICHU

TAITO

TAKAO

MAKO

KIRUN

T'AIHOKU

KARENKÖ

INDOCHINA COAL EXPORTS TO CHINA

INDIA, AUSTRALIA AND ALL COAL EXPORTS

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RAILROADS	GR-I	GR-I	NE
X XXX		GR-I	OA
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